

CLAIMS

1. A drainage system for a roof window including at least one window frame and/or one sash frame having walls, characterized in that at least one drainage groove is placed in the walls of the said window, where the drainage groove can be positioned in the window frame, and/or the drainage groove can be positioned in the sash frame.
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2. Drainage system for a roof window according to claim 1, wherein the drainage groove is positioned in the window frame and the sash frame, thereby creating a main drainage system.
- 10 3. A drainage system according to any one of the preceding claims, wherein the drainage groove is positioned at the inner surface of the window frame and/or at the outer surface of the sash frame, and/or wherein the drainage groove is positioned at the lateral frame members of the window frame, and/or wherein the drainage groove is positioned at the top frame member of the window frame, and/or wherein the drainage groove is positioned at the lateral frame members of the sash frame, and/or wherein the drainage groove is positioned at the top frame member of the sash frame, and/or wherein the drainage groove is positioned at the top frame member of the window frame, and/or wherein the drainage groove is positioned at the lateral frame members of the sash frame, and/or wherein the drainage groove is positioned at the top frame member of the sash frame.
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- 20 4. A drainage system according to any one of the preceding claims, wherein the drainage groove of the window frame has a concave surface, extends along the inner walls of the window frame and includes a flange protruding outwardly from the inner surface of the window frame, and/or wherein the drainage groove of the sash frame has a concave surface, extends along the outer walls of the sash frame, and includes another flange protruding from the outer surface of the sash frame.
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5. A drainage system according to any one of the preceding claims, wherein the drainage grooves formed in the inner surface of the window frame constitute a complex drainage channel for the window frame, while the drainage grooves

formed in the outer surface of the sash frame constitute another complex drainage channel for the sash frame, and wherein the complex drainage channel for the window frame comprises the drainage grooves formed with the lateral and bottom members of the window frame, while the complex drainage channel for the sash frame comprises the drainage grooves formed with the lateral and bottom members of the sash frame.

5 6. A drainage system according to any one of the preceding claims, wherein it further comprises a first sealing surface on the top surface of the window-frame flange and a second sealing surface on the bottom surface of the sash-frame flange, with a sealing element sandwiched between the first and second sealing surfaces, wherein the drainage grooves of the window frame can be correspondingly located underneath the drainage grooves of the sash frame, with the first sealing surface facing the second sealing surface, so that water overflowing from the sash-frame drainage grooves goes into the window-frame drainage grooves, and wherein the first and second sealing surfaces can be horizontally oriented in the lateral frame members of the window frame and the sash frame and inclined in the top frame members of the window frame and the sash frame, wherein the lower end portions of the drainage grooves of the lateral frame members of the window frame can be gradually curved upwardly to the top surface of the bottom frame member of the window frame, wherein the lower end portions of the drainage groove has a width which can be reduced as the position for measuring the width approaches the bottom member of the window frame, wherein the lower end portions of the drainage grooves on the lateral frame members of the sash frame can have a curvature upwardly towards the top surface of the bottom frame member of the sash frame, wherein the lower end portions of the drainage grooves have a width which can be reduced as the position for measuring the width approaches the bottom member of the sash frame.

10 20 25 7. A drainage system according to any one of the preceding claims, wherein the cross section of the drainage-groove surface of the lateral frame members of the window

frame is formed by linear sections, curved sections and/or combinations thereof, wherein the cross section of the drainage-groove surface of the top frame member of the window frame can be formed by linear sections, curved sections and/or combinations thereof, wherein the cross section of the drainage-groove surface of the lateral frame members of the sash frame can consist of a portion of the outer wall surface of the sash frame and a portion of the top surface of the flange of the sash frame, wherein the top surface can be inwardly inclined down, wherein the cross section of the drainage-groove surface of the top frame member of the sash frame can consist of a portion of the outer wall surface of the sash frame and a portion of the top surface of the flange of the sash frame, wherein the top surface can be flat, wherein the inner surface of the bottom frame member of the window frame can be provided with a separate reservoir for receiving rain, dew and condensate from the pane, wherein the bottom surface of the separate reservoir can be flat and ended with a flange formed with the inner surface of the bottom frame member of the window frame, wherein the top surface of the flange can define a sealing surface facing a corresponding sealing surface defined on the bottom frame member of the sash frame, with a sealing element sandwiched between the sealing surfaces, wherein the separate reservoir can be ended with the flanges of the drainage grooves of the lateral frame members of the window frame, and wherein the inner surface of the bottom frame member of the window frame can be inclined.

8. A drainage system according to any one of the preceding claims, wherein a horizontal drainage groove can be positioned on the top surface of the bottom frame member of the sash frame and can communicate with two exit placed at both ends of the lateral frame members of the sash frame and be communicating with a flashing member, wherein a mounting groove can be formed in the bottom frame member of the window frame, with an end of the bottom-frame covering and an end of the flashing member hanged in that mounting groove, and the bottom-frame covering overlaps the flashing member, and thereby the drainage water from the window frame can be discharged from the covering to the flashing member,

wherein the drainage groove of the lateral frame members of the sash frame can extend along the top surface of the bottom frame member of the sash frame to the end of the top surface, where the drainage water can be discharged to the flashing member.

- 5 9. A drainage system according to any one of the preceding claims, wherein each of the window frame and the sash frame can consist of an outer layer and an inner layer, and the outer layer can be a coating and the inner layer can be a wooden core, wherein the coating can be made of two layers, one of which can be PUR and the other can be paint, wherein the thickness of the PUR layer can change along the 10 perimeter of the wooden core.
10. A roof window comprising a window frame, a sash frame, an covering and a flashing member, each of the window frame and the sash frame including a top frame member, a bottom frame member and two lateral frame members, characterized in that at least one drainage groove can be placed in the walls of the 15 window frame and the sash frame, wherein the drainage groove can be positioned in the window frame, and/or wherein the drainage groove can be positioned in the sash frame.
11. A roof window according to claim 10, wherein the drainage groove is positioned in the window frame and the sash frame, thereby creating a main drainage system, 20 wherein the drainage groove can be positioned at the inner surface of the window frame or at the outer surface of the sash frame, wherein the drainage groove can be positioned at the lateral frame members of the window frame, and/or wherein the drainage groove can be positioned at the top frame members of the window frame, wherein the drainage groove can be positioned at the lateral frame members of the sash frame, and/or wherein the drainage groove can be positioned at the top frame 25 member of the sash frame.
12. A roof window according to any one of the preceding claims, wherein the drainage groove of the window frame can have a concave surface, extends along the inner walls of the window frame and includes a flange protruding outwardly from the

inner surface of the window frame, wherein the drainage groove of the sash frame can have a concave surface, extends along the outer walls of the sash frame, and includes another flange protruding from the outer surface of the sash frame.

13. A roof window according to any one of the preceding claims, wherein the drainage grooves formed in the inner surface of the window frame constitute a complex drainage channel for the window frame, while the drainage grooves formed in the outer surface of the sash frame constitute another complex drainage channel for the sash frame, and wherein the complex drainage channel for the window frame comprises the drainage grooves formed with the lateral and bottom members of the window frame, while the complex drainage channel for the sash frame comprises the drainage grooves formed with the lateral and bottom members of the sash frame.
14. A roof window according to any one of the preceding claims, wherein it further comprises a first sealing surface on the top surface of the window-frame flange and a second sealing surface on the bottom surface of the sash-frame flange, with a sealing element sandwiched between the first and second sealing surfaces, wherein the drainage groove of the window frame can be located correspondingly underneath the drainage groove of the sash frame, with the first sealing surface facing the second sealing surface, so that water overflowing from the sash-frame drainage groove goes into the window-frame drainage groove, wherein the lower end portion of the drainage groove has a width which can be reduced as the position for measuring the width approaches the bottom member of the window frame, wherein the lower end portions of the drainage grooves on the lateral frame members of the sash frame can have a curvature upwardly towards the top surface of the bottom frame member of the sash frame, and wherein the lower end portions of the drainage grooves have a width which can be reduced as the position for measuring the width approaches the bottom member of the window frame.
15. A roof window according to any one of the preceding claims, wherein the cross section of the drainage-groove surface of the lateral frame members of the window

frame can be formed by linear sections, curved sections and/or combinations thereof, wherein the cross section of the drainage-groove surface of the top frame members of the window frame can be formed by linear sections, curved sections and/or combinations thereof, wherein the cross section of the drainage-groove surface of the lateral frame member of the sash frame can consist of a portion of the outer wall surface of the sash frame and a portion of the top surface of the flange of the sash frame, wherein the top surface can be inwardly inclined down, wherein the cross section of the drainage-groove surface of the top frame member of the sash frame can consist of a portion of the outer wall surface of the sash frame and a portion of the top surface of the flange of the sash frame, wherein the top surface can be flat, wherein the inner surface of the bottom frame member of the window frame can be provided with a separate reservoir for receiving rain, dew and condensate from the pane, wherein the bottom surface of the separate reservoir can be flat and ended with a flange formed with the inner surface of the bottom frame member of the window frame, wherein the top surface of the flange can define a sealing surface facing a corresponding sealing surface defined on the bottom frame member of the sash frame, with a sealing element sandwiched between the sealing surfaces, wherein the separate reservoir can end with the flanges of the drainage grooves of the lateral frame members of the window frame.

16. A roof window according to any one of the preceding claims, wherein a horizontal drainage groove can be positioned on the top surface of the bottom frame member of the sash frame and can communicate with two exit placed at both ends of the lateral frame members of the sash frame and be communicating with a flashing member, wherein a mounting groove can be formed in the bottom frame member of the window frame, with an end of the bottom-frame covering and an end of the flashing member hanged in that mounting groove, and the bottom-frame covering overlaps the flashing member, and thereby the drainage water from the window frame can be discharged from the covering to the flashing member, wherein the drainage groove of the lateral frame members of the sash frame can extend to the

top surface of the bottom frame member of the sash frame, from which the drainage water can be discharged to the flashing member.